

5 What is claimed is:

1. A recombinant polypeptide which binds to the IGF-1 receptor, wherein the recombinant polypeptide is encoded by a nucleic acid selected from the group consisting of:

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a) the nucleic acids shown in SEQ ID NO:5 or a nucleic acid sequence which is complementary thereto;

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b) nucleic acids which hybridize under stringent conditions with one of the nucleic acids from a) encoding a polypeptide showing homology with the polypeptide of SEQ ID NO:6; and

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c) sequences that due to the degeneracy of the genetic code encode IIP-10 polypeptides having the amino acid sequence of the polypeptides encoded by the sequences of a) and b).

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2. A recombinant polypeptide according to claim 1, wherein the hybridization in b) is performed in 5.0 x SSC, 5 x Denhardt, 7% SDS, 0.5 M phosphate buffer pH 7.0, 10% dextran sulfate and 100 µg/ml salmon sperm DNA at about 50°C-68°C, followed by two washing steps with 1 x SSC at 68°C.

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3. A method for the detection of the proliferation potential of a cancer cell comprising

a) incubating a sample whereby said sample contains nucleic acids with a nucleic acid probe which is selected from the group consisting of:

(i) the nucleic acid shown in SEQ ID NOS:1, 3 or 5 or a nucleic acid which is complementary thereto; and

(ii) nucleic acids which hybridize with one of the nucleic acids from (i) and

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b) detecting the hybridization by means of a further binding partner of the nucleic acid of the sample and/or the nucleic acid probe.

- 5 4. The method of claim 3 wherein said sample is selected from the group consisting of
body fluid of a patient suffering from cancer; tumor cells; a tumor cell extract; and
a cell culture supernatant of said tumor cells.
- 10 5. The method of claim 3, wherein hybridization is effected at least with the nucleic
acid fragment of SEQ ID NO:1 or SEQ ID NO:5 or the complementary fragment.
6. The method of claim 3 wherein the nucleic acid to be detected is amplified before
the detection.
- 15 7. The method of claim 5 wherein the nucleic acid to be detected is amplified before
the detection.
- 20 8. A method for screening a compound that inhibits the interaction between IGF-1R
and IIP-10 comprising:
- 25 a) combining IGF-1R and said IIP polypeptide with a solution containing a
candidate compound such that the IGF-1R and said IIP polypeptide are
capable of forming a complex and
- 30 b) determining the amount of complex relative to the predetermined level of
binding in the absence of the compound and therefrom evaluating the ability
of the compound to inhibit binding of IGF-1R to said IIP.
- 35 9. A method for the production of a therapeutic agent for the treatment of carcinomas
in a patient comprising combining a pharmaceutically acceptable carrier with a
therapeutically effective amount of a compound which modulates the interaction
between IGF-1R and IIP-10 in a cellular assay, whereby in said cellular assay tumor
cells or cells transfected with expression constructs of IGF-1R and of said IIP are
treated with said compound, and complex formation between IGF-1R and said
respective IIP is analyzed, and the extent of said complex formation in the case of
inhibition does not exceed 50% when referenced against 100% for complex
formation without said compound in said same cellular assay.

add a.3

- 5 10. A method according to claim 9, wherein the compound inhibits the interaction.

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